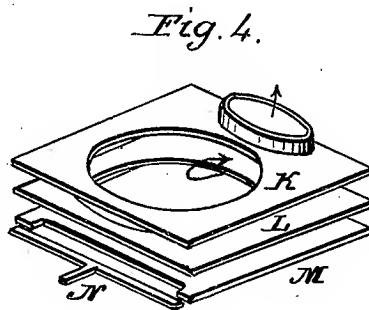
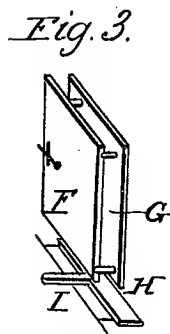
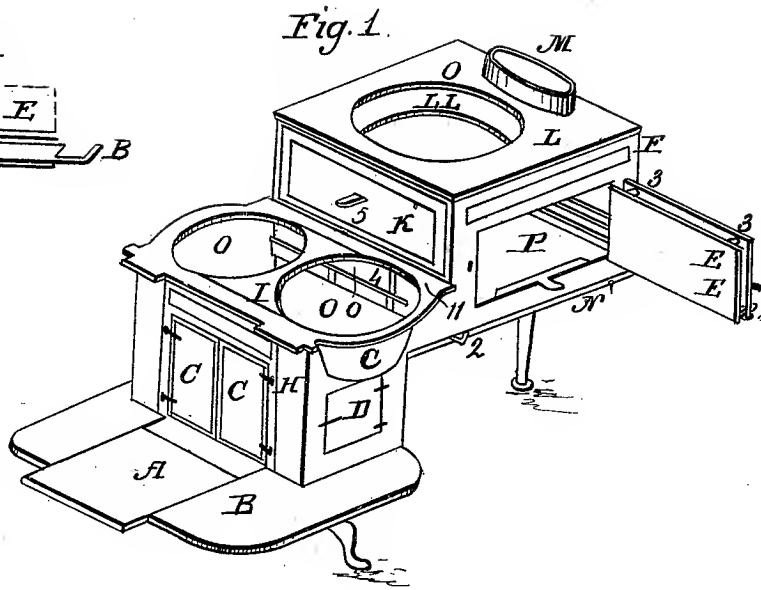
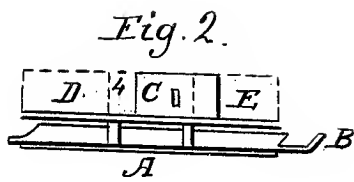


E. REED.  
Cooking Stove.

No. 303.

Patented July 29, 1837.



# UNITED STATES PATENT OFFICE.

EDWIN REED, OF WEST BRIDGEWATER, MASSACHUSETTS.

## COOKING-STOVE.

Specification of Letters Patent No. 303, dated July 29, 1837.

*To all whom it may concern:*

Be it known that I, EDWIN REED, of West Bridgewater, in the county of Plymouth and State of Massachusetts, mechanic, have invented a new and useful Improvement in the Mode of Constructing Cooking-Stoves, called "Reed's Improved Cooking-Stove," of which the following is a full and exact description, illustrated more fully by the drawing and explanation thereof hereto annexed.

I propose to describe the cooking stove in full as constructed by me on my improved mode, and as I proceed to point out specifically my improvements which I claim, as every other part of the stove, except those improvements in common use and not claimed by me.

The bottom plate which is in common use, is twenty-six inches long and twenty inches wide, with a sunken bottom two and a half inches in depth, eleven inches wide and eighteen inches long. This cavity is covered over with a loose plate which rests on the main plate, so as to bring their upper surfaces into a plane with each other. This loose plate I call a side hearth, and is used to admit or exclude air, by sliding it to or from the fire. On the bottom or hearth plate rest the front, side and back plates. The front plate is 19 inches wide and 14 inches high. In this plate is a space 11 inches wide and 9 inches high which is closed by two front doors. The parts of the side plates which rest on the hearth are 9 inches wide and 14 inches high with swells on the upper edges so as to admit boilers. Three inches from the bottom edge of one of the side plates is a side door five inches square for the purpose of supplying fuel to the fire. From one side plate to the other is a back plate 17 inches long 8 inches high which forms the fire room making it an oblong square 17 inches long and 9 inches wide. The side plates after resting 9 inches on the bottom or hearth plate rise 8 inches, then project back 18 inches from the fire room which makes these plates 27 inches long. Eleven inches from the front these plates widen or rise 8 inches and form the side of the stove. The low part over the fire room is a top plate 22 inches long and 11 inches wide passing from one side plate to the other covering the swells on the side plates, and forming the top of the front part of the stove. In this top plate there are two

holes one 8 inches in diameter and the other 9 inches in diameter, leaving a space of plate between the two holes of two and three-fourths inches. This is a separate plate, which can be taken out from between the two holes when required. These two holes are for the reception of boilers and when not used for that purpose they are covered with griddles. On the back edge of this top plate rests a plate 17 inches long 8 inches high passing from one side plate to the other, having its upper edge level with the side plates, making the back part of the top of the stove 8 inches higher than its front part. This back part is covered with a plate 17 inches by 18 inches with a boiler hole 11 inches in diameter coming within one and a half inches of its front edge. On the back edge of this top plate one-half inch from the edge rises an oval flange 9 inches long,  $2\frac{1}{2}$  inches wide and one and one-fourth inches high for the reception of the stove pipe. On the bottom after the rise of 8 inches from the hearth there is a bottom plate 18 inches wide by 19 inches long on which rest the side plates and back end plate. This back end plate is 17 inches by 14 inches. These plates form the outside of the stove. Two inches back of the fire room on the bottom plate is a damper 17 inches long, 2 inches wide resting at each end on pivots that project through the sides of the stove having a handle on one side. Immediately in front of this damper stands a plate on two legs each one and one-quarter inches long. This plate contains apertures at each end 5 inches long and 4 inches wide leaving the plate below the apertures but three-fourths of an inch wide. The office of this plate is to support a slide damper  $4\frac{1}{2}$  inches wide  $6\frac{1}{2}$  inches long which rests in a dovetail groove which runs the whole length of the plate. This damper is held in its place at the top by a small rib or cleat extending down one-fourth of an inch from the front top plate leaving the damper loose so as to slide over either of the holes at pleasure. The office of this apparatus is by turning up the long damper and closing the aperture then sliding the upper damper over either of the holes which it is made to cover at pleasure to cause the whole strength of the fire to pass under and around the boiler which sets in front of the unclosed hole or aperture. This mode of arranging these dampers as above described

so as to cause the whole strength to act upon either of the boilers in the front part of the stove is my first improvement the exclusive benefit of which I claim. The advantage of this improvement consists in the saving of fuel, and in the quickness of the operation of boiling. Back of this improvement is the oven as in other cooking stoves composed of four plates. The bottom plate is 13 inches wide at the doors 17 inches long reaching from one side plate to the other. At each end of this plate is an aperture one-half inch wide and  $8\frac{1}{2}$  inches long with two dampers which hang in dovetail grooves on the underside of this plate with their handles projecting out under the oven doors. These dampers are  $8\frac{1}{2}$  inches long  $1\frac{1}{2}$  inches wide and their office is to close the apertures in each end of the bottom plate of the oven. The top plate of the oven is of the same dimensions as the bottom plate, having the same apertures but no dampers. The two side plates of the oven are 17 inches long and 8 inches wide. On each of the two side plates are four ribs for the purpose of receiving the oven grate. On each end of these side oven plates seven-eighths of an inch into the oven there is a shoulder of one-quarter of an inch, which makes the oven 12 inches by 8. The doors which close each end of the oven are made of two plates  $12\frac{1}{2}$  inches by 8 inches. These plates are riveted together by one rivet passing through the center of them and rest at the corners by projecting parts of one of these plates so that a space is left between the two doors of one-half inch in all parts except where the rivets and projections interfere. These doors hang on hinges as in other cooking stoves and when shut form a plane with the outside of the stove projecting the inner plates of the doors into the oven against the shoulders of the side plates of the oven, thus forming a flue between the two plates of the oven doors for the admission of the heated air from the fire to pass up through the apertures of the bottom plate of the oven between the two door plates, and thence off through the similar apertures in the top plate of the oven. By this arrangement on removing the dampers over the apertures at the bottom of the oven the ends of the oven may be heated at pleasure.

The mode of constructing the flues, aper-

tures and dampers as above described so as to heat the ends of the oven is my second improvement which I claim. The advantage of having the ends of the oven heated even with the sides and bottom in baking is obvious.

Between the top plate of the oven and the top plate of the stove which are four inches apart is inserted at a distance of two inches from each of them a middle plate 17 inches by 16 inches resting on projecting parts of the outside plates. In this middle plate is a hole 11 inches in diameter directly under the boiler hole of the top plate. The office of this middle plate is to cause all the heated air from the fire after passing around the oven to pass up through the 11 inch hole before it passes out through the flange and act directly upon the boiler, and by the same process heating the top of the oven, by causing the heated air to pass between the top of the oven and the middle plate, in an even degree with the sides, ends, and bottom. The advantage of this is to have all parts of the oven heated in an even degree, and to have the whole strength of the fire act upon the boiler also.

This mode of causing the hot air to act upon the top of the oven and the boiler on the top of the oven is my third and last improvement.

All the dimensions of this cooking stove may be varied at pleasure. The several parts may be fastened together by bolts.

When coal is used in this stove the fire room must be lined with tile and a suitable grate inserted.

The stove stands on three legs of such length as may be convenient.

I will here mention that there is a damper resting on the top of the oven on its front side 16 inches long,  $2\frac{1}{2}$  inches wide, with a handle in the middle which projects through a hole in the outside plate back of the two front boilers. This damper is in common use and is to regulate the heat on the front side of the oven.

The stove plates are wholly made of cast iron.

EDWIN REED.

Witnesses:

ELLIS AMES,

DANIEL CRANE.